

REMARKS

By this Amendment claim 1 has been amended to include the feature of claim 3 and otherwise better define the invention, claim 4 has been revised relative to its dependency, and claim 20 has been amended in a corresponding fashion to claim 1. Entry is requested.

In the outstanding Office Action the examiner has rejected claims 1-11 and 15-18 under 35 U.S.C. §102(b) as being anticipated by Saakharov et al. The examiner asserts that all the limitations in the rejected claims are disclosed in Saakharov et al.

The inventors disagree! They assert that Saakharov et al. only disclose measurements of crystal cuts within the range of -90° to 90° to find out the maximum range of the electromechanical coupling coefficient, but there is no disclosure of using cuts with low values of the electro-mechanical coupling coefficient to improve the quality factor. Further, Saakharov et al. do not disclose improvement in the quality factor by suppression of anharmonic resonance frequency as now recited in amended claim 1 (see specification at page 6, last paragraph).

The examiner's rejection based on Saakharov et al. should be withdrawn.

The examiner has rejected claims 1, 2, 8, 9, 11-14 and 18 under 35 U.S.C. §102(b) as being anticipated by Philippot et al., and claims 20-23 under 35 U.S.C. §103(a) as being unpatentable over Philippot et al.

However, Philippot et al. only disclose values for the electro-mechanical coupling coefficient within a range of 90° to -90° , without any suggestion to use crystal cuts with a low electromechanical coupling coefficient. Further, there is no teaching that a single crystal resonator element has a frequency spacing to the nearest excitable anharmonic resonance frequency of more than 80 kHz.

The examiner's rejections based on Philippot et al. should be withdrawn.

The examiner has rejected claim 19 under 35 U.S.C. §103(a) as being unpatentable over Saakharov et al. in view of Kochurikhin et al.


However, Kochurikhin et al. cannot be said to overcome the deficiencies in the examiner's rejection of amended claim 1 based on Saakharov et al. Therefore, claim 19 should be allowed along with amended claim 1.

Favorable reevaluation is requested.

Respectfully submitted,

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